



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,459	08/19/2003	Jason G. Franklin	50002.49US01/10.84	4104
23552	7590	09/21/2005		
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903				
			EXAMINER PATEL, NIKETA I	
			ART UNIT 2182	PAPER NUMBER

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,459

Applicant(s)

FRANKLIN, JASON G.

Examiner

Niketa I. Patel

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6-14, 17-20, 22-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Herath U.S. Pat. App. Pub. No.: 2004/0091042 A1 (hereinafter "*Herath*").

3. Referring to claims 1, 13, 14, 22, 24, *Herath* teaches an apparatus, a method and a system for compressing data from a data stream [see paragraph 0005, 'sounds, music, videos'], comprising: a hardware compressor [see paragraph 0093, 'can be implemented as physically distinct hardware circuits within an ASIC'] that is arranged to provide compressed data in response to buffered data [see paragraph 0027, 'the data is input through a buffer'], wherein the compressed data is encoded according to a first compression format [see paragraph 0064, 'first compression and encoding processor'] with a first byte window size [see paragraph 0064, 'fixed length data packet']; and a logic block that is arranged to: receive data associated with the data stream [see paragraph 0063, figure 1, element 120], store the data as the buffered data [see paragraph 0063, figure 1, element 130], forward the buffered data to the hardware compressor [see paragraph 0064, figure 1, element 140], receive the compressed data from the hardware compressor, convert the compressed data to a second compression format [see paragraph 0065, figure 1, element 150] with a second byte window size that is different from the first byte

Art Unit: 2182

window size [see paragraph 0065, 'variable length data packet'], and provide the converted compressed data [see paragraphs 0066-067.]

4. **Referring to claim 6**, *Herath* teaches the logic block comprising: a compression controller that is arranged in cooperation with a memory, wherein the compression controller is arranged to control the interaction of the logic block with the hardware compressor [see paragraphs 0063-067.]

5. **Referring to claim 7**, *Herath* teaches wherein context switching is maintained in the memory and the compression controller is configured to provide history information to the hardware compressor based on a context stored in the memory [see paragraphs 0063-067.]

6. **Referring to claim 8**, *Herath* teaches further comprising another hardware compressor that is arranged to provide compressed data in response to another buffered data, wherein the other compressed data is encoded according to the first compression format with the first byte window size; and wherein the logic block further comprises a multiplexer that is arranged to select one of the hardware compressors for operating on the buffered data [see paragraphs 0063-067.]

7. **Referring to claim 9**, *Herath* teaches further comprising a flow controller that is arranged to receive requests for data, retrieve the requested data, and provide compressed data in response to the requested data [see paragraphs 0063-067.]

8. **Referring to claims 10, 23, 25**, *Herath* teaches wherein the flow controller is arranged to: monitor resources associated with the flow controller, algorithmically compress the data stream with the flow controller when the resources associated with the flow controller are below a minimum criteria, and forward data streams to the logic block for compression when the

Art Unit: 2182

resources associated with the flow controller exceed the minimum criteria [see paragraphs 0067-0068 and 0094.]

9. **Referring to claims 11, 26, *Herath*** teaches wherein the minimum criteria is associated with at least one of processor usage, memory usage, and desired compression ratio [see paragraphs 0063-067.]

10. **Referring to claims 12, 27, *Herath*** teaches wherein the flow controller includes a flow control processor and a context memory wherein context switching is maintained by the flow controller in the context memory, and wherein the flow controller is arranged to provide history information to the logic block based on a context stored in the context memory [see paragraphs 0063-067.]

11. **Referring to claim 17, *Herath*** teaches further comprising: extracting history information from the data received by the logic block from the flow controller, sending the history information to the selected hardware compressor, updating the history information in response to the first compressed data with the logic block, and sending the updated history information to the flow controller [see paragraphs 0063-067.]

12. **Referring to claim 18, *Herath*** teaches wherein the history information is extracted from another header that is provided by the flow controller to the logic block, wherein the other header includes at least one of a context location flag, a reply m, a context data, a first block flag, and a byte count [see paragraphs 0063-067.]

13. **Referring to claim 19, *Herath*** teaches further comprising: retrieving history information that is associated with the data stream from a memory that is associated with the logic block, sending the history information to the selected hardware compressor, updating the history

Art Unit: 2182

information in response to the first compressed data with the logic block, and saving the updated history information in the memory that is associated with the logic block [see paragraphs 0063-067.]

14. **Referring to claim 20**, *Herath* teaches further comprising: assembling another header with the logic block such that the history information is associated with at least one of a context location flag, a reply ID, a context data, a first block flag, and a byte count, wherein sending the buffered data includes sending the other header to the selected hardware compressor [see paragraphs 0063-067.]

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 2-5, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Herath* U.S. Pat. App. Pub. No.: 2004/0091042 A1 (hereinafter "*Herath*").

17. **Referring to claims 2, 3, 4, 5, 15, 16**, *Herath* teaches an apparatus, a method and a system for compressing data from a data stream [see paragraphs 0063-067.] *Herath* does not set forth the limitation of the following various types of compression formats ALDC, GZIP, LZ77, 512 bytes window size, 32K bytes window size, 411 bytes window size.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer art to get the advantage of reducing the

Art Unit: 2182

size of data files and packets, thereby increasing the amount of data that can be transmitted over a communication link with a particular bandwidth by using various types of compression formats such as, ALDC, GZIP, LZ77, 512 bytes window size, 32K bytes window size, 411 bytes window size. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include various types of compression formats such as, ALDC, GZIP, LZ77, 512 bytes window size, 32K bytes window size, 411 bytes window size to get this advantage.

18. Claims 21, 29-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Herath U.S. Pat. App. Pub. No.: 2004/0091042 A1 (hereinafter "*Herath*") and further in view of Garakani et al. U.S. Pat. App. Pub. NO.: 2004/0210668 A1 (hereinafter "*Garakani*").

19. **Referring to claims 21, 29, *Herath*** teaches an apparatus, a method and a system for compressing data from a data stream [see paragraphs 0063-067.] *Herath* does not set forth the limitation of further comprising: compressing another buffered data according to the first compression format with another selected hardware compressor, wherein the hardware compressor and the other hardware compressor are operable in parallel for enhanced compression speeds. *Garakani* teaches the above stated limitation [see paragraphs 0028-0035 and figure 2, elements 202A-D] in order to allow for a increased processing time, which in turn would allow for faster through put of data over a communication link. One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the system of *Herath* to be able to increase processing time, which in turn would allow for faster through put of data over a communication link. It is for this reason that one of ordinary skill in the art would have been motivated to implement *Herath's* system with

Art Unit: 2182

parallel compressors in order to increase processing time, which in turn would allow for faster through put of data over a communication link.

20. **Referring to claim 30**, teachings of *Herath* as modified by the teaches of *Garakani* teaches wherein the compression format and the other compression format are different form one another [see paragraphs 0063-067.]

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents have been made record of to further show the state of the art as it pertains to two-stage compression:

Ruehle U.S. Pat. App. Pub. No.: 2004/0190635 A1

Nishimura U.S. Pat. App. Pub. No.: 2004/0001207 A1


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (571) 272 4156. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272 4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
9/17/2005



KIM HUYNH
PRIMARY EXAMINER
9/19/05